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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/715,071	11/17/2003	Alexander Busch	TER-00P0016	3313
24131	7590	06/14/2004	EXAMINER	
LERNER AND GREENBERG, PA P O BOX 2480 HOLLYWOOD, FL 33022-2480			PALABRICA, RICARDO J	
			ART UNIT	PAPER NUMBER
			3641	

DATE MAILED: 06/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/715,071

Applicant(s)

BUSCH ET AL.

Examiner

Rick Palabrica

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/17/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 5 and 7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 5 recites a bending angle sensor and claim 7 recites a strain gauge. Both the sensor and gauge are part of the sensing arm of the measuring head. The specification discloses that the position of the measuring head, which position determines a contour or characteristic of an object to be tested (e.g., a fuel rod), can be determined by a combined analysis of measured values of the strain gauge and the bending angle sensor (see page 15, lines 15+ of the specification). There is neither an adequate description nor enabling disclosure as to how and in what manner the said measured values of the strain gauge and the bending angle sensor are to be combined to obtain the desired result. As presently set forth, the bending angle sensor – strain gauge combination is essentially a “black box” with no description of the internals

thereof. The disclosure is therefore insufficient in failing to set forth in an adequate and sufficient fashion, a description of this combination that would enable an artisan to use the invention for its intended function. If the applicant is of the opinion that there is a description in the prior art (in the form of literature, etc. having a date prior to the filing date of this application) of the internals of this black box, copies of said literature, etc. must be submitted for appropriate review by the Office. See *In re Ghiron et al.*, 169 USPQ 723, 727.

The Applicant is reminded that 35 U.S.C. 112 requires the specification to describe the invention to enable an artisan not only **to make but to also USE** the claimed invention.

If the Applicant intends the bending arm sensor and the strain gauge to separately provide information on the test object, as opposed to having their measured values combined, then the claims would still be rejected because the scope of the claims would be broader than the specification.

2. Claims 5 and 7 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure that is not enabling. The manner of combining the measured values of the strain gauge and bending angle sensor to yield information on the tested object, which is critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. For example, what weight should be given to the strain gauge values and what weight should the bending sensor data in the combination? See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976).

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims.

Claim 5 recites the limitation of a sensing arm secured to the carrier body through a bending joint, and a sensor is disposed for recording a bending angle of said bending joint. The bending angle sensor and the bending joint must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 6, 8 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Bacvinskas et al. (U.S. H 0,001,262). They disclose a fuel rod examination gauge (see Abstract and Figs. 3 and 4) for performing a large number of exacting measurements in fuel rods. Their apparatus comprises: a) a plurality of measuring devices, i.e., eddy current probe 45 and magnescale probe assembly 46, each having a sensing arm with a laterally deflectable free end. The eddy current probe 45 measures the fuel rod oxide thickness (see column 5, lines 3+). There is a carrier body 43 carrying the two measuring devices 45, 46, and mounted on a plurality of rollers 31, 39 disposed along the fuel rod.

As to the limitation in claim 2 regarding the coil and its connection to the eddy current detector, an eddy current detector inherently includes a coil connected to the detector and therefore Bacvinskas et al. meet this limitation.

As to the limitation in claim 3, applicant's claim language "sensor housing" reads on either one or both clamp bracket 53 and pivoting fixture 52 (see Fig. 4 and col. 5, lines 3+).

As to claim 6, applicant's claim language deflectable spring steel for the sensing arm reads on the highly compliant stainless steel bellows 48 that surrounds probe assembly 46. Note that the claim language "deflectable" is synonymous to Bacvinskas et al.'s term "highly compliant."

The claims are replete with statements that are either essentially method limitations or statements of intended or desired use. For example, "for measuring a thickness of a layer on a fuel rod", "to be guided along the fuel rod", etc. These clauses, as well as other statements of intended use do not serve to patently distinguish the claimed structure over that of the reference, as long as the structure of the cited references is capable of performing the intended use. See MPEP 2111-2115.

See also MPEP 2114 that states:

A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. Ex parte Masham, 2 USPQ2d 1647.

Claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function. In re Danly, 263 F.2d 844, 847, 120 USPQ 528, 531.

[A]pparatus claims cover what a device is, not what a device does." Hewlett-Packard Co. v. Bausch & Lomb Inc., 15 USPQ2d 1525, 1528.

As set forth in MPEP 2115, a recitation in a claim to the material or article worked upon does not serve to limit an apparatus claim.

The system in the cited references is capable of being used in the same manner and for the intended or desired use as the claimed invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Petit (U.S. 5,754,611) in view of Kleesattel (U.S. 3,308,476). Petit discloses the applicant's claims except for the sensing tip made of diamond.

Petit discloses a tungsten carbide measuring tip for the magnescale probe that measures the diameter or ovality of a fuel rod (see column 4, lines 28+, or column 6, lines 2+).

Kleesattel teaches the use of either diamond, sapphire or tungsten carbide for the tip of resonant sensing devices that measure physical properties or characteristics of test pieces. He teaches that any one of these well-known tip materials is wear resistant. One having ordinary skill in the art would have recognized that both primary and secondary references pertain to testing of pieces by means of probes whose tips are required to be in contact with the test piece, and therefore subject to wear. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus, as disclosed by Petit, by the teaching of Kleesattel, to use diamond instead of tungsten carbide for the probe tip, because such modification is no more than the use of well-known expedients within the art, and

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the substitution of one material by another well-known known material to perform the same function.

Conclusion


6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. References C-E further illustrate prior art.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rick Palabrica whose telephone number is 703-306-5756. The examiner can normally be reached on 7:00-4:30, Mon-Fri; 1st Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Carone can be reached on 703-306-4198. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RJP
June 7, 2004

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